DOCUMENT RESUME

ED 409 563 CS 215 868

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TITLE Improving Instruction in the Language Arts and in the Arts through Book-Making: A Collaborative Inquiry in a Second-Grade Classroom.
PUB DATE May 95
NOTE 37p.; Paper presented at the Annual Meeting of the New England Educational Research Organization (Portsmouth, NH, May 3-5, 1995).
PUB TYPE Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Action Research; *Art Activities; Grade 2; Illustrations; *Instructional Improvement; *Integrated Activities; *Language Arts; Primary Education; Revision (Written Composition); Teacher Collaboration
IDENTIFIERS *Book Production

ABSTRACT

An action research study investigated the relationship between literary development and integrated instruction in visual arts (illustration) and language arts. Subjects were students in a second-grade classroom and in an art room in a public school of 500 students in an affluent part of a suburban community. Interactions were examined between subject matter and pedagogical methods in the arts and the language arts, between teachers and learners, input and outcomes of the learning process, and the social context in three interrelated learning contexts--reading workshop, writing workshop, and art workshop. The collection of data included participant observation, videotaping, and interviewing. Results indicated: (1) when the art teacher and the classroom teacher collaborated on a book-making project, they learned disciplinary knowledge from one another; (2) the teachers knew how to sequence learning for maximum retention of concepts and skills in both the arts and language arts; (3) the students increased their knowledge and use of concepts and terms related to literature, writing, and the arts; (4) teaching the arts in book-making improved learning in both language arts and in the arts; (5) students' treatment of topics, use of illustrations, and knowledge of revision evolved during the unit; and (6) students revised during the entire unit. Findings suggest that the teachers benefitted directly, and the children benefitted from the teachers' collaboration. (Contains 73 references.) (RS)

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Improving Instruction in the Language Arts and in the Arts through Book--Making: A Collaborative Inquiry in A Second-Grade Classroom

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A paper presented at the Annual Conference of the New England Educational Research Organization, Portsmouth, N.H. May 1995

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Introduction

There is a movement underway to put the arts back into language arts education. Years of observation by arts educators and classroom teachers suggest that the arts play a significant role in motivating children to learn to read and write. Yet Kindler's (1989) review of arts programs that are integrated into the general curriculum revealed that there is a dearth of serious research to back up assumptions about the positive role that the arts contribute to overall literacy development. Our research investigates the relationship between literary development and integrated instruction in visual arts (illustration) and language arts. It involves an elementary teacher who uses a literature-based, whole language approach for teaching reading and writing, an art teacher who uses a discipline-based arts education approach, and a university professor of education who studies literacy contexts and practices.

Context, Statement of Purpose Research, and Participants

Context

The study took place in a public school of 500 students in an affluent part of a suburban community. The population is predominantly Caucasian. The study took place in a second grade classroom and in the art room between September 1994 and May 1995. The setting was selected because the art teacher was enrolled in a language arts course where she was creating an integrated unit in the arts and in language arts.

The two teachers have taught in self-contained settings for five years. This year they have decided to collaborate on a book-making project involving nineteen students in a suburban school. The goal was to help the children read, write, and illustrate a picture book. In order to achieve that goal, the children had to acquire many interrelated skills. They had to analyze literature and illustrations, then to use their knowledge of story structure, literary style, and illustration techniques to publish their own book. The students learned illustration principles and techniques in the art room using the same picture books that they read in their classroom. Then the children applied what they learned by writing books. The teachers were not experimenting with new methods, rather they were investigating what happens when they restructured the learning environment from self-contained and discipline-based to collaborative and interdisciplinary.

Statement of Purpose for the Study

The research tracks the process of collaboration over time-- comparing and contrasting disciplinary contexts and practices, and examining the learning process and outcomes for both teacher and students. Reflective analysis of videotapes, field notes, interviews, products and performances, were used to provide us with knowledge about the subject matter, teaching and learning, developmental learning process, and social context. Our questions include these: How does the interdisciplinary collaboration influence learning? How do the children's choices of topics and genre evolve as they analyze the story structure, literary genres, and illustrations in children's books? How does the study of illustration influence children's learning in language arts? How do children revise their stories? Do they revise based on verbal feedback from peers? Do they revise based on their illustrations? The information gained from this research can be

used to improve the quality of learning in primary classrooms in area schools and to improve the fit between the course and field work experiences of preservice teachers in our university teacher education program.

The Participants

The art teacher, Ms. Smith (a pseudonym), has been teaching art at this school for five years. Ms. Smith develops lessons designed to teach children the concepts, language, and techniques of art and that children must be instructed in art as they are instructed in other subjects. She draws on the ideas of art educators like Jean C. Rush (1987), who note that discipline-based art education teaches children visual analysis, art production, and critical/ historical analysis through tutored image-making. She does not believe that project and activity-based art programs provide sufficient structure or instruction in art elements and principles. Consequently, Ms. Smith exposes the children to art work and objects which illustrate specific design elements and principles. She uses the vocabulary of the discipline, demonstrates particular techniques, and invites children to practice those techniques in structured lessons. [1]

Recently Ms. Smith decided to earn a degree in elementary education. As part of her certification requirement she needs to study language arts. The field-based action research is one component of her course work in the language arts course. Ms. Smith is interested in exploring the relationship between verbal and visual literacy, and is particularly interested in the work being done by Olshansky (1994) .[2] Olshansky's approach to education in the visual arts seems quite unstructured, but Ms. Smith's training and her experiences with the children in this middle-class suburban school lead her to provide structure and instruction in a more systematic manner.

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[1] Rush describes the conceptual core of a discipline-based art lesson in the following manner (summer, 1987). She suggests that a discipline based art lesson have the following components: visual analysis, art production, and critical/ historical analysis. In her mind, the image-making process is one which involves "tutored" images. "Tutored images" are solutions to visual problems which are taught in structured and sequential lessons. As in other disciplines, the visual arts contain conventions which must be practiced to be mastered. (Rush, 1987: 212-220). Her lesson plan follows a mastery model and outlines the topic, grade, rationale, learning objectives (task analyzed and stated in behavioral terms), [visual analysis]: vocabulary, vocabulary images, [art production] materials, demonstration, class activity, evaluation criteria, [critical/ historical analysis] art images, art information. Rush's main intention in advocating for a sequential curriculum is to define the arts as a discipline not just a project to be completed at the end of another kind of learning activity.

[2] Olshansky, an art educator/ researcher at the Laboratory for Interactive Learning at the University of New Hampshire in Durham, New Hampshire and a colleague, Barbara Rynerson, study the aesthetic and literary development of first graders. Olshansky and Rynerson lead the children in analysis of the content and illustrations in children's books. Then, the children create textured papers through a process of marbleizing. Olshansky notes that the young children's stories, mainly fantasies, are spontaneously generated as the children engage in the open-ended, experiential art activities (Olshansky, 1994, p. 14). Her main point is that chidlren arrive at stories in various ways-- through exploration and production of art and through writing. In their video and in articles on their collaborative work, Olshansky presents the subjects in her research as natural artists.

After five years of informal observation of her students' art work Ms. Smith notes that many children in the elementary grades are receptive to structured, discipline-based art lessons.

> Children enjoy it when they can analyze, then copy the work and techniques of artists. They also like to examine, then represent, objects in their world.
>
> (Smith, January, 1995)

She notices that the children seldom actually copy the drawings or the techniques in a deliberate way, rather they glance at the picture or object, think about what they know, and create their own, often decorative, images. Thus, Ms. Smith encourages analysis and copying of techniques. Ms. Smith also provides the children with opportunities for transfer learning. She gives them time to explore of media and materials and to apply previously learned techniques in their own original work. Her practice is supported by those who advocate for discipline-based art education such as Elliot Eisner (1987) and Jean C. Rush (1987). Although she believes that children have natural talent, she believes that artists are trained. Her subject matter content and pedagogy emphasizes skills, but her curriculum is child-centered, holistic, and interdisciplinary.

The classroom teacher, Ms. Jones (a pseudonym) has a master's degree in education and has been teaching for five years. She uses a whole language approach in when constructing her classroom philosophy. On the bookshelf behind her conference table are books by-- Routman (1991), Graves (1983), and Calkins (1986). Ms. Jones believes that children learn to read and write well in contexts where communication is natural and meaningful. In her classroom, children read and respond to books, establish personal and group learning goals, and generate criteria for successfully achieving those goals. Ms. Jones leads children to literacy through intelligent modeling of literate behavior. For example, she analyzes literary genres, informational texts, and newspaper stories with her students and engages them in discussions of high quality literature. Moreover, she models collaborative and personal writing. In addition, she teaches the students how to use graphic organizers and plan-think sheets for organizing their projects. She emphasizes reading and writing connections. Ms. Jones guides her students through the problem-solving process and engages them in problem-based learning. She demonstrates critical and creative thinking and creates opportunities for the children to learn through social interaction and cooperation. She emphasizes self-discipline, choice, and ownership in the learning environment. For example, students communicate what they have learned by creating projects, performances, and papers. They evaluate their own progress and the progress of peers throughout the learning process. Similarly, the teacher evaluates her choices and the intended and unintended consequences of those choices. The knowledge, experiences, and preferences of the learners inform her curricular and instructional decisions.

The study

The study was conceived by the art teacher, Ms. Smith, who invited me to collaborate with her on creating a project on book-making, that combined illustration arts and literature. We decided that the project would be more interesting if she collaborated on it with a peer. Ms. Smith and Ms. Jones began

videotaping their classes and collaborating on the project in October 1994. . In December 1994, I was invited into the classroom to observe, meet the children, and assist with videotaping. Initially, I was a participant-observer in the art classroom, but by March, children eagerly shared their portfolios and own books during my classroom visits. Throughout the research process, I observed classes, transcribed and analyzed videotapes, reviewed the literature, kept notes in a journal, and reflected on the data with teachers and students. We met as a team occasionally. Ms. Smith and I met weekly from November through May. At those meetings we discussed our observations, field notes, and the transcriptions of the videos, articulated the next steps in the research, and reviewed our findings. Ms. Smith and Ms. Jones met regularly to discuss the project.

The role of the research

After seventeen years of teaching, I earned a Master's in Education in 1988, a certification in Educational Administration in 1989 (Supervisor/ Director or Language Arts), and a Doctorate in Education in 1992. During my teaching career, I did research on my students' learning and my teaching, while taking relevant courses at a nearby university. I often worked in classrooms alongside peers because my area of interest and expertise was making learning environments and the learning accessible to diverse learners. Such work always involves problem-solving and lifelong learning. Hence, while teaching, I earned certifications in art education, special education, reading, educational administration and supervision, a master's and a doctorate in education. Currently, I teach language arts and curriculum and assessment courses at a university which borders on a suburban and urban areas.

Conceptual framework

In the last decade there has been a renewed interest in arts education. This review of literature focuses on three general approaches to education in the arts-- first, discipline-based programs, then integrated approaches to teaching the arts, such as at Project Zero, and finally language arts/ arts collaborations. The first group of studies suggests that the arts should be taught separately (Debes, 1970; Eisner 1987). These researchers and practitioners maintain that the subject matter and habits of mind in the arts must be taught in a systematic manner from K-12 by people who have training and experience in the arts. The second collection of studies reflect a developmentalist perspective, thus the arts ought to be taught through integrated projects Gardner (winter, 1989). These practitioners maintain the arts are an important means of understanding and interpreting knowledge. Hence, serious training in the arts should accompany all significant learning experiences in the classroom from K-12. They emphasize the importance of keeping the knowledge, experiences, and interests of the children at the core of the instruction and assessment in the arts. Thus they resist the tendency to develop a fixed, sequential curriculum, favoring instead a description of competencies and documentation by performances and projects. The third group of studies reflects a constructivist approach. Hands-on exploration of art materials, exposure to fine literature, and construction of good projects leads children to learn to read and write more effectively (Mitchell, 1990, Miller-Hewes, 1994). This group of studies suggests that literacy instruction can be enhanced through arts

explorations (Johnson, 1993; Hubbard, 1989, Olshansky, 1993, 1994). Our study is most similar to Olshansky's approach. The emphasis of our study is on developing ways to improve overall literacy through integration of the arts and language arts. In this research study, we hypothesized that both education in the arts and literacy can be enhanced through a disciplined, thoughtful, book-making collaboration. The paper describes and investigates the evolutionary process of one such collaboration.

Research methodology

This is an action-research project. Action-research is a form of collaboration which is designed to bring faculty members together within and across institutions for the purpose of improving practice. Oja and Smulyan (1989) noted that action-research typically enables collaborators to develop new knowledge and to develop greater self-confidence and insight about teaching and learning. We viewed learning as involving transactions between and among teachers and the learners. We examined interactions between subject matter and pedagogical methods in the arts and the language arts, interactions between teachers and learners, input and outcomes of the learning process, and the social context in three interrelated learning contexts--reading workshop, writing workshop, and art workshop.

Methods

Qualitative field research procedures being used in this study are similar to those used in the ethnographic field work of Frake (1962, 1980) and synthesized for reading by Green and Bloome (1983) in their criteria for ethnographic research in educational settings. Our analyses of videotapes and transcriptions draw both from sociolinguistic literature that suggests that some interactions are governed by context-specific rules. Our analyses of videotape transcripts and classroom observations draw from research on teaching and learning (Brophy and Good, 1995) which suggests that there are some generic teaching and learning strategies that are associated with mastery of information and skills, motivation, and effective transfer of knowledge from structured lessons to everyday situations. Interviews provided additional background information. That enabled us to reflect perspectives of participants and to assess aspects of the learning environment and the learning from their perspective.

Sources of Data

Data were collected over a period of seven months, 1994-1995. A variety of data-collecting procedures were employed--participant-observation, videotaping, and interviewing. Each source of data provided a different perspective on the learning environment and the learning. First, data collected using participant-observation and ethnographic interview techniques suggested by Spradley (1979) were recorded in field notes. Recorded there were descriptions of the learning environment, observations on the learning process, interviews with teachers and students, preliminary analyses and reflections on the data. Recorded in the field notes were decisions about curriculum planning and revision, outcomes, selection of content, skills, and materials, sequencing of instruction, and on-going assessment. General observations of the students' developmental abilities and more specific information about their knowledge of story structure,

genre, the writing process, and illustration techniques were recorded in field notes from October through March.

We collected data on five videotapes that were subsequently transcribed. Videotapes documented teacher-directed lessons during reader's workshop (story structure and elements, illustration analysis, , during writer's workshop (review of the process, revision, and editing) and art workshop (illustration technique, analysis, and critique) sessions. Videotapes were also used to document special events. The researcher, teachers and children used the videotapes to investigate the learning process, context, and outcomes.

Since the research questions were articulated in advance, most of the data from students was elicited during whole class discussion sessions, which were videotaped. At times students were videotaped conversing with teachers about their works-in-progress. In general, students were not singled out for interviewing or for specific attention. However, on two occasions in March, students met in small groups to discuss their portfolios and books. Most of the questions in the interview sessions were framed so that they helped students elaborate on their own thoughts. By the end of each interview, however, data were collected that helped us to respond to the research questions.

We collected interview data. Interviews were conducted by teachers. During interviews the students discussed their intentions when selecting subject matter. They explained their learning goals and skills, how they selected topics and illustration materials, and revisions. They discussed their approaches to illustration, story making and book-making. Occasionally we elicited responses to our research questions.

We collected samples of student work in portfolios. Students maintained writing and illustration folders throughout the project. Samples of children's art work, including their illustrated books, were collected in portfolios before, during and after the intervention.

Analysis

Three learning contexts were investigated: story time, writer's workshop, and the art workshop. The learning process and products were analyzed. Analyses focused on the interrelationships among: a) subject matter and pedagogy, b) teachers and learners c) the learning process d) the revision process. Different kinds and different levels of analysis were employed depending on the kind of data-- observational, interview, videotape, portfolio, product. Some data were often analyzed several times using different tools. First, when analyzing lesson sequences, I transcribed and analyzed the lessons in reading, writing, and art to see how the three contexts were structured. I analyzed all lessons using Brophy and Good's kinds of learning (1995), Bloom's levels of thinking (1954) , and Briggs' typology of teaching (1979). I compared and contrasted progressions in the reading and writing processes with those suggested by Tompkins and Hoskisson (1995) and analyzed data from art lessons were analyzed using Rush's (1987) components of a discipline-based arts lesson plan. The purpose of the analyses of lessons in each context was to better understand how the teachers structured the learning and the learning environment and to see how children transferred learning from one context to the next.

The second type of analysis focused on interactions during the learning process. Data from the reading and writing lessons were then re- analyzed using theories from sociolinguistics research which suggests that learning is created by both how people act, what they say, and how they say it (Green & Bloome, 1983). I used , Hymes' (1974) acronym--S-P-E-A-K-I-N-G--to attend to setting, participants, events, actions, keys, intonation, norms for interpretation and interaction, and genres. I looked at elements such as norm-setting, conversational rules, and body language.

Thirdly, we analyzed how the students selected the topic and genre for their story, and how they used their emerging knowledge of story structure and illustrations to modify the stories and illustrations in writing their own books. Exit interviews focused on discussing the core questions. The interviews of four students were videotaped as they presented their portfolios and the finished drafts of their books. The students showed and talked about items in their portfolio. Analyses focused on the way those students organized and discussed the items in the portfolios (organization, concepts, topic choice, genre, use of concepts and vocabulary of stories and illustrations, reactions, and self-evaluation).

We were particularly interested in the revision process. We wondered whether children revised texts based on verbal feedback or whether they revised them based on their illustrations. The students published two versions of their final book. One version was hand written and was illustrated in drawings in the classroom. The other version was typed and students illustrated the text using one of the techniques they had learned in the art room: collage, painting, water color, or silhouette. We analyzed videotapes of classroom and art room instruction to see how the children organized and illustrated each of two versions of their book. We analyzed interviews with a few students and teachers to provide further information about how the children interpreted each version of the book.

Description and Analysis of Three Learning Contexts

The Task

The teachers collaborated on a book-making unit, in which each child would create a book. The children participated in reader's and writer's workshops two hours each day and they participated in art workshop one hour each week. During those workshops the teachers facilitated the children's learning of story structure, illustration techniques, and the writing process. The children needed to learn how to read a book. They also needed to learn how authors go about writing a book, and how artists go about illustrating a book. The teachers selected four core books, Leo Lioni's, *Frederick*, Crocket Johnson's, *Harold and the Purple Crayon*, Pfsister's, *The Rainbow Fish*, Pierkowski's *The Christmas Story*. All four core books were fantasy books because they used the illustration techniques of either collage, line drawing, water color, or silhouette and because they had a simple, predictable story structure. They determined criteria for evaluating the children's work: 1) ability to follow the writing and illustration processes which were modeled in whole and small group sessions in both classrooms, 2) ability to select a genre, write a story that had a beginning, middle, and end, had characters, setting, plot, problem and solution, and met the

criteria for effective writing for second graders at the school, 3) ability to make illustrations that extended the message in the story using one of four techniques--collage, water color, silhouette, or line drawings.

Context I: A Reading Lesson

The first sequence illustrates steps in the learning process in a classroom where the teacher models the strategies that the students will need for independent reading and for contstructivist learning. The sequence is a combination of many lesson sequences that took place during story time. However, it illustrates the kinds of modeling and instruction that occurred in the classroom during the storybook activity. The children are seated in a circle on the rug around the teacher who sits on a chair reading a book, *Frederick*, by Leo Lioni. Immediately after the lesson, the children go into the art classroom where they will make collages using Lioni's illustrations as a guide.

Before reading, Ms. Jones asks questions that will activate the children's prior knowledge, the first step in the reading process, and will prepare the children to read the book. Ms. Jones starts the lesson by asking the students to survey the book and illustrations, activate prior knowledge, and make predictions. These are the questions she asks before reading the text.

[Predict and Confirm]

[Activate Prior Knowledge]
What is the title of this book?
What do you know about this topic?
Do you know any other books by this author?
Do you know any books by this illustrator?
What do you think the book will be about?

These are goal-directed questions which focus the students on key elements of the story-- character development, plot, setting, problem and solution. The questions also invite the children to recall information that may help them understand the story. As they are reading the text, the teacher poses questions that focus the students on aspects of story structure.

[Listen for the lead.]
Listen to the way the author begins the story.
Why do you think he begin the story that way?
[Character development]
How does the author create the character of Frederick?
[Setting]
Where does the story take place?

After reading a bit of the text, Ms. Jones asked the students to think about what they read. Some questions help the children to make inferences, elaborate, and summarize the story.

[Plot]
Why do you think that the mice went over and under the wall?
Do the mice look worried?

Ms. Jones poses questions that require the children to respond to the stories in a variety of ways. Open-ended questions enable the children to process the story on a personal level and to elaborate on their understanding of the story. Such questions also invite the child to make discoveries, plan sequels, and

become story tellers themselves. Storytelling is a precursor to story writing in the primary grades so that this activity prepares the students for writing their own stories.

[Point of view]
What would you have done if you were Frederick?
[Hypothesize]
What do you think that Frederick and the mice will do in their next adventure?

Ms. Jones poses questions that extend the children's knowledge of the genre. Eventually, the children will have to select a format for their own story so it is important to teach the features of genre during the reading lesson.

[Analysis of the features of genre]
What kind of a story is this?
What part of the story is real and what part is make-believe?
Why do you think Lioni wrote this story in this way?
[Connecting knowledge]
What other stories have you read that are similar to *Frederick*?

Ms. Jones asks questions that lead the children to do disciplined research. She asks them to attend to details in the illustrations. She asks them to think about how the artist uses materials to create images. Authors and illustrators do research when they are making books. Finished products are partly real and partly inventions. Critical readers and critical viewers check out information presented in texts.

[Analysis of illustration techniques]
How did the illustrator create the pictures?
Why do you think the illustrator chose collage?
Have you seen any other books by this illustrator?
What medium did the artist use when making the illustrations?

She also leads the children to achieve deeper levels of analysis of the story through questioning.

How did the artist use the materials?
Did the artist's choice of colors and pictures influence your understanding of the story?

Effective readers think about what they know, about details in the text, and about context while reading. They respond to what they read through extension activities like discussions and in projects. Ms. Jones' learning sequences lead the children to identify the structure of the text. She helps them to identify stylistic features of particular genres. She wants them to think about why the authors write books. She wants the children to think about how authors and illustrators work together to extend meaning of the text. She wants them to think like authors and illustrators because she wants them to become authors and illustrators. Her instructional sequence resembles one described by leading researchers in the field of language arts education (Tompkins and Hoskisson, 1994, p. 232.)

The lesson also meets the criteria for effective learning sequences and event as they were described by to Good and Brophy (1995: 237-257, especially 244) in their description of kinds of learning. For example, Ms. Jones, calls the students' attention to facts and concepts that are important for comprehending the story-- the title, the characters, the plot, and the pictures. She also teaches them procedures for reading a text. Her instruction is intentional. She wants them to read and write books independently. One way of

achieving that goal is to learn the elements of a story. She selects events that are meaningful for the children. She wants the children to understand how Lioni wrote and illustrated *Frederick*, but she also invites the children to become authors, to compose their own ending to Lioni's story. Many of the questions are open-ended. Much learning is incidental so when Ms. Jones models thoughtful and close reading and when she poses thought-provoking questions, the students are learning to read that way themselves. Ms. Jones embeds both rote learning and higher-level thinking by reading the entire text, then by going back to analyze details and discussing key parts of the story. She invites the children to elaborate on their understanding of the story, to be receptive and active learners. She also guides their learning through questioning. She wants them to discover the meaning together. She wants them to be inquiring and engaged learners.

The specific outcomes for the project were to help the children develop the competencies to make their own book. We examined the instructional sequence used for teaching the children how to read a book. The first reading of the book took five minutes. Analysis took much longer. The composite above suggests that the teacher posed questions one right after the other and children responded in a stimulus and response fashion, but that is not what actually happened in the classroom.

The following activity, which was excerpted from one lesson sequence, took fifteen minutes. It illustrates the quality of the student and teacher interaction. It seems as if Ms. Jones is teaching the students norms for conversations in this segment of discourse.

Ms. Jones poses a single question: "How do you think that the illustrator made these pictures?" then she listened as each child responded to that single question. Without prompting, the children's initial responses were tentative and brief, later responses were more thoughtful and elaborate.

[Question]

[Analysis of illustration techniques]
Teacher: How do you think the illustrator made these pictures?
Child: He may have put his thumb in some paint to make Frederick.
Child: He may have used crayons.
Child: He may have used sponge and paint to make the grass.
Teacher: Ah...

(The teacher acknowledged the contributions of each child with a nod.)

Child: I think he may have cut paper and put it on the page to make the picture.
Child: He may have cut colored paper in the form of the picture.
Child: I think he put color tissue paper on the page and he painted over it.
Child: I think he may have cut out colored paper, except the grass, on the grass, it looks like he cut out a paper bag, then he glued it onto his picture and put paint on it.
Child: I think he used colored paper on the picture.
Child: Why do you think he used colored paper?
Child: Because when you work in crayon it looks more rounded, and that doesn't look rounded.
Child: In regular pictures it looks all colored in and in this one it doesn't.
Child: It looks like torn paper.
Child: I thought that it looked wrinkled.
Child: I thought it was regular paper for the grass and then the grass was made with sponge paint because with the paper it looks more real.

[Listen and respond appreciatively.]
Teacher: You are all right. He has glued paper on the page and painted on it, that is why the illustrations look different from those in Harold and His Purple Crayon. We know that illustrator drew lines. This is different from other books you've seen.

Gagne and Briggs (1979) observe that children develop attitudes through modeling. The teacher is modeling attentive listening, and the children are listening to one another. They build on the contributions of each other. Ms. Jones attends to and clearly values the students' contributions. She guides them in their analysis of the illustrations. She asks them to reflect on other illustrator's styles. She focuses them on details. She teaches them how to become critical viewers and active listeners. Note how she asks them to focus carefully on a detail, then to verbally problem-solve the artists' technique.

[Analysis of Details]
Teacher: Let's study the rock on this page.
Child: I can tell that the rock is made of yellow tissue paper and then he wetted it.
Child: I think he painted that.
Teacher: Show me.

When analyzing a problem it is a good idea to consider all of the evidence carefully. Salome (1984) suggests that careful analysis of visual information can help people understand hidden messages. The analysis of illustrations leads the students to think about the difference between real and make-believe. Lioni's mice have human characteristics and real personalities. The book is a fantasy. The children discussed the fact that real mice don't talk. Ms. Jones helps them analyze how the illustrator uses the illustrations to extend the text.

[Evaluate the accuracy of information]
Teacher: Let's look at the mice. Does this look realistic? What do mice really look like? What is different about these mice?
Child: Mice don't usually have bumps on them.
Teacher: Bumps on them? So that is what is different about these.

Kiefer (1995) suggests that we need to find out about the contribution that illustrations make to children's interpretation of stories and their knowledge of story structure. Here a child is using the illustration as a springboard for conversation about the habits of mice.

[Acknowledge and extend conversation]
Child: Mice don't usually live on rocks; they live in the ground.
Teacher: You are thinking more specifically about where mice live.
Child: Their arms look like sticks!
Teacher: Is that realistic?
Child: No, that's not usual.

There are rules for entering and leaving conversations. The teacher's leadership in teaching conversational norms through modeling is essential in classrooms where students will eventually work together in small peer-led discussion groups (Wiencek and O'Flahavan, 1994). In the next bit of dialogue, Ms. Jones models a rule that she uses when she is going to switch topics and she does not want the children to be confused.

[Politeness in switching topics]

Teacher: May I say something different about the way this illustrator works? Sometimes when artist draw something they outline it. When we look at the mouse, the edge doesn't look straight or smooth.

Ms. Jones knows that the students will be producing collages in the art classroom after this discussion. She uses the art terms that will be used there to discuss the illustration technique of collage--outline, edge, smooth, and straight. When she is done with her comment, the students resume answering the question that interests them: Do the illustrations look realistic?

[Continue with previous topic]
Child: Mice don't usually carry their food in their hands... or on their back.
Teacher: **Well, how do they carry their food then?**
Child: Oh, I don't know. Maybe they carry it on their back.
[Check accuracy of sources]
Teacher: Perhaps later we should look into how mice carry their food.
Child: I think that the bumps on the mice's backs are fur.
Teacher: You think so?

In every classroom there is the lesson plan and then there are the actual lessons. Much learning is incidental. The child thought that mice didn't carry food in their hands or on their backs. The tone of his voice is tentative and questioning. The teacher invites the child to do further research on mice. In an interview in March, one child said that he enjoyed *Frederick*, but he also enjoyed the book about real mice. He liked finding out how mice really lived.

A single question elicited several levels of thinking-- knowledge, interpretation, and analysis. Just before closing the lesson, the teacher invited the children to make final comments. The final comments were evaluative in nature. Then the teacher transitions the children to the art room where they made illustrations like those in the book.

[Linking knowledge across instructional contexts]
Teacher: Anything else?
Child: It kind of looks like tissue paper overlaps, if you turn to the part where they were dreaming. When you try to overlap color with crayon it doesn't look good, so he did it with paper. It looks pretty.
Child: On the other page with the tissue paper he took a sponge and tapped paint on so that it fell in speckles on the rocks.
Teacher: Now you are going into the art room to learn how to make these kinds of illustrations.

Reflecting on the class discussion, we find that the students focused mainly on the illustrator's use of materials (paint, crayons, sponge, tissue paper, glue) and the content (real vs. make believe mice, setting) of the pictures. However, they also discussed some aspects of aesthetics--process and technique by which the artist made the illustrations (Greer, 1987). The children and teacher used the language of art--color, overlapping, wrinkled, quality of line, edge, and shape (Ocvirk, 1991). In this structured lesson the children are using the illustration to extend their interpretation and appreciation of the story.

Context II: The Art Room

The instructional sequence is coordinated so that the children leave their classroom after the discussion of the book and enter the art room, where they engage in a hands-on exploration of the illustration technique. Some of the components of the discipline-based art lesson occurred in the regular

classroom, for example, analysis of Lioni's technique, but it was in the art room that the teacher named and described the technique--collage. In the following sequence, the art teacher demonstrates the collage techniques, explains the procedure Lioni uses, and asks the children to copy the style. Copying is out of fashion in many classrooms, but Ms. Smith sees value in having the students copy the work of illustrators and artists. Lamme & Thompson (1994) note that teachers have been trained not to copy, but that copying teaches children skills and gives them confidence. In their research, they have observed that children learn new techniques by copying from their peers.

[Illustration Analysis]
Analysis took place in Ms. Jone's classroom.

Teacher: Today you are going to create collages. You discussed the Lioni's collage in your language arts class today and now you are going to make collages.

[Demonstration]
Ms. Smith constructed a collage like one by Lioni, explaining each step in the process.

[Production]
Teacher: What are you doing here?
Child: I made rocks. I painted them, then gave them freckles. (Spattering paint on paper.)
Teacher: Rock have freckles? That is a great idea.
Child: It looks like freckles, doesn't it?

(The teacher moved to the next child.)

Teacher: Hello.
Child: Look, I made grass and daffodils... Lots of daffodils.
Teacher: Oh, that yellow in the grass are daffodils. Lovely.
Teacher: I see that you are making rocks. Why are you using the sponge?
Child: You are supposed to. It looks better. Why though.

As she circulates among the students, she asks questions about technique. The children discuss the content of their pictures, and they use some art related terms--mixing, dabbing, and sponge painting. The art teacher uses terms like texture. Recent research in arts education illustrates the importance of questioning in the learning process (Armstrong, 1986) Of equal importance is the importance of talk (Tompkins & Hoskisson (1994). The children learn better when they can talk freely about their perceptions and interpretations, than when teachers tell them the answers. They learn to focus their attention on the task, to use the vocabulary, to listen to one another, to compare, contrast and evaluate rival hypotheses, and to understand the concepts of the disciplines. When the teacher guides the discussion in a thoughtful manner, the children learn to become critical thinkers. If we expect children to become independent learners and self-evaluating individuals, then we have to help them develop criteria for evaluating their own progress and their products.

[Concepts and vocabulary]
Teacher: This is a nice texture. Why are you using the sponge to make that texture?
Child: It works. We are taking sponges and mixing colors and dabbing them on the rocks. Look, yellow, brown, and white... It looks like a round rock. I am copying Lioni's illustration. I am making a collage.

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(The teacher moves to the next child.)

Teacher: What are you doing?
Child: We are sponge painting the grass for a picture. We are copying ideas from the book we read. We are learning to make collages like the illustrator made.

Each child explains what he or she is doing, where he or she got his or her idea, and why he or she is engaged in the activity. The discussions in response to teacher questioning helped the child form concepts and procedures for producing a collage.

In an interview after the collage session, Ms. Smith notes that she wishes that she had tape recorders on each child because the children's conversations are so interesting. Some of the children tell stories about the mice as they construct the illustrations. At times two children who are working on collages side-by-side construct collaborative stories. Other children coach themselves through the task.

In workshop-oriented classrooms, children have to take responsibility for following routines and for their learning. In art classrooms, this is particularly true because the children must help with set up and clean up, so the teacher took a no-nonsense approach to a child's request for clarification of a routine.

[Responsibilities]
Child: Where do you put these when you are done?
Teacher: Is that a silly question? Where?
Child: Over there.
Teacher: That's right.

The videotape revealed smiles on the faces of the student and the teacher as they parted.

Context III: The Writer's Workshop

Back in the classroom, the children participate in writing workshop. The children participate in a writer's workshop for one hour every day. During that time the children learn to establish habits that real authors have use when writing their books. They have a regular time scheduled for writing, keep a folder which contains their ideas for topics, prewrites, freewrites, drafts, notes, and other props that they use for writing. The following sequence, another composite vignette, illustrates how Ms. Jones leads the children through the writing process. She uses procedures recommended in Graves' (1983), *The Writing Process: Teachers and Students at Work*. She draws on developmental information from Calkin's, *The Art of Children's Writing* , to select instructional strategies that complement the children's level of functioning. She connects reading, art, and writing experiences in a meaningful way.

[Before writing]
We read about Frederick today in reading. Frederick has some adventures. You have had some adventures too. You could write a story about those adventures. It could be a real or a fantasy story. In order to write a story you need to think up a topic.
[Modeling and instruction]
Let's list some topics for our stories on the chart paper.
[Guided instruction]
Let's take some time to list some topics for stories in our writing notebooks.
[Purpose-setting/ Activating prior knowledge]
Writers have to decide what to write about and how to write their story.
How did Leo Lioni write his story about Frederick?
Is Frederick a real mouse?

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Why do you think Lioni wrote his story that way?
[Audience awareness]
For whom will you write your story?
How will you write your story?

This is an example of a minilesson. The minilesson enables the children to draw on their own knowledge and their knowledge of a shared story and to become the decision-makers as they write their story. The sequence leads the children through the initial phases of the writing process. It is repeated often during the first weeks of the workshop. The sequence is also repeated with each of four core books, underscoring the ways that authors write books. [3] After deciding on a topic the children begin drafting their own original story. The teacher models the drafting process in front of the class before she asks the children to develop their own stories. In the early phases she emphasizes the value of drafting while talking with friends.[4]

[Drafting]
Real authors take time to write and time to talk about their writing with other writers. Let's work together and become authors, too.
Take some time to write a beginning for your story.
[Modeling and instruction]

Next the teacher turned on the overhead projector. She asked the children to join her in constructing a collaborative story. The children suggested ideas and the group selected the best ideas, then the teacher wrote the story on the transparency, talking through her thinking and teaching them strategies that they might find useful when writing their own stories.

Let's write about one adventure or one memory.
[Modeling and instruction]
It is a good idea to skip every other line on your rough draft, then you can go back later and add to or change your ideas.

After they completed the group lesson, she asked them to begin writing their own story.

[Independent work]
Talk with your friends about your idea for the story.
Take some of the ideas you get from your discussion and expand your idea.

We often think of drafting as an activity one engages in silence, but in writing process classrooms, people talk with one another during the drafting stages. They share work in progress, and elicit and respond to feedback from the teacher and from peers.

[Revising]
Authors sometimes ask colleagues to read their writing. They listen to their colleagues comments about their writing. Friends can ask questions that help an author write more. They ask about a character, the setting, or the problem in the story.
[Modeling and instruction]

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[3]Atwell (1987a, 1987b) provides suggestions and modeling of mini lessons in her book, *In the Middle.*

[4]Calkins' (1989) video, *The Wrriting Workshop: A World of Difference* provides wonderful examples of how teachers actually conduct mini lessons in the classroom.

I'm working on my character today. I have written a description of the character, but I don't know what to do next. What do you suggest?
[Independent work]
Take some time in peer conferences today to discuss parts of the story that really work for you. Ask questions about parts that don't work so well. Tell the author what you expected to read or hear so that they can revise their story.
As you are listening to your friend, jot down ideas in the margins so that you can go back and add to or cut your story.
Authors change their work. Sometimes they cut and paste things in different places so that their story makes more sense. Use scissors and tape to move the parts of your story around so that the story makes sense. Remember that this is only a draft.

It actually took months for most students to write their stories. Children did not all identify topics during the session that the teacher modeled the strategy. The teacher often modeled a strategy several times, sometimes in small group or in individual conferences.

The revision and editing lesson was videotaped in the classroom in February 1995. What follows is an excerpt from the transcript, in which the teacher assesses the students' understanding of the writing process. The teacher is modeling an instructional strategy recommended by Graves (1983) that helps the children think about what they are learning in the writing workshop. Anthony, Pearson, & Raphael (1989) highlight the importance of teaching metacognitive strategies during reading instruction. Metacognitive strategies require students to ask themselves questions that help them predict, confirm and comprehend texts. Ms. Jones teaches the children to use metacognitive strategies when they are writing. She wants them to think about what they are doing and why they are doing it. She wants them to ask themselves the same kinds of questions when they are writing and revising that they ask when they are reading: What do I know about the subject? How does an author select a topic? How does an author create characters? How does an author use punctuation? These second graders are beginning to internalize some of the strategies that are used by effective writers and they are also learning the steps in the writing process.

[Review, rehearsal, and remembering strategy instruction]
Teacher: Let's talk about the writing workshop. What is the first step?
Child: I think about what I want to write.
Teacher Is there anything else that you might use to help you think of a topic?
Child: I can use the story wheel in the writing center.
Child: I can look at a favorite book.
Child: I can talk with a friend.
Teacher: Let's say that you have an idea. What do you do?
Child: I write it down.
Child; I write my first draft.
Teacher: Do you worry about the spelling?
Child: On the first draft, no. I just get those awesome ideas shooting out of my pencil.
Teacher: What if you get stuck? What can you do?
Child: Have a conference.
Teacher: How does that help you?
Child: I get ideas.
Child: I can make a two part story.
Child: I can think of another story and come back to this one later.
Child: I can write ideas in my writing folder.
Teacher: Say you have written your story, and you like it. What do you do next?

Child: I have a conference with a friend.
Teacher: Why? What does your friend help you to do?
Child: My friend helps me to edit my story.
Child: I add to my story.
Child: I write a better story.
Child: I get ideas.
Teacher: Does your friend help you to decide on a title?
Child: Sometimes.
Child: The friend says, "What about the first sentence? Why is it special?
Teacher: What! Do you make the first sentence goofy? Why?
Child: To catch the reader's interest.
Teacher: Then what do you do with those ideas from your friend?
Child: I add to the story.
Teacher: How many of you have had a successful conference? What happened during the conference?
Child: I got ideas.
Child: I did another part.
Child: I got an idea for a better ending.
Child: I got all of these details.
Child: I made my story longer.
Child: I wrote a whole, new story.
Child: I realized that I skipped a step.
Teacher: We are going to talk about editing today-- commas, capitals, misspellings. I have written a silly story. I want you to help me edit it.
Teacher: I am going to teach you a way to edit. If you rush, you won't catch your errors.

[Placed the story on the overhead projector.]
Teacher: In the editing phase, you go over every single word and bit of punctuation with your pencil. As you go you circle the problem with your pencil.
[The piece was edited while the teacher illustrated the editing process.]
Teacher: Now you are going to do this yourself. You need a pencil. I will give you a checklist of things to watch for while you are editing. Put this into your folder.

This sequence has routines and components which are similar to those employed in the earlier reading lesson. The teacher poses questions, listens attentively, and models each new skill, then invites the children to practice the skill in their original writing projects. Her questions lead the children through the levels of thinking-- comprehension, analysis, application, and evaluation. Tompkins and Hoskisson (1994) note that the reading and writing processes have comparable activities--previewing/prewriting, constructing meaning/ composing, clarifying meaning/ revising, responding/ conferring with peers, extending interpretations/ publishing and sharing. They note that students and teachers engage in similar interactions when discussing reading and writing. When working in a workshop context, use process-oriented approach, in which each child constructs stories through social interaction, role playing, and conversation. It is important to understand that the teacher proceeded with the modeling and instruction sequence, even though the children were not all at the same place in their own writing. The learning is reflexive and recursive. The students keep reflecting back on what and how they are proceeding in their learning. They make revisions as they go along in the process. Most children changed their topics several times as they were introduced to new books and new illustrations. Yet over time, each child had a story and a clear idea of how to draft and polish the story.

Discussion of Findings

How did the collaboration influence learning?

Collaboration takes time, energy, and commitment. The collaboration influenced teachers and children to generalize concepts and to use strategies across disciplines and across disciplinary contexts. When the project began, Ms. Smith had little background in literacy education. Ms. Jones had little formal background in art. Through careful planning of their collaboration, the teachers planned an integrated unit that focused on meaningful outcomes, essential skills, engaging activities, and coherent instructional sequences. The unit enabled the teachers and students merge their knowledge of two disciplines--language arts and art, so that they gained a deeper understanding of the subject matter in each discipline. When the project began, the children were beginning readers and writers, but they had never written a personal story or illustrated a book. In seven months, the children learned how to read, write, and illustrate a book.

The interdisciplinary and inter-institutional collaboration took time, effort, and commitment. The collaboration was initially scheduled to last three months, but lasted beyond seven months. It is easy to say, "Let's work together on a book-making project," and quite another thing to actually coordinate effectively across contexts and disciplines. Constructivist learning does not occur spontaneously. Our findings support the findings of Gagne and Briggs (1979) who noted that real learning occurs when children have competent models, can actively explore materials, and can discuss new learning.

The children transferred knowledge across contexts-- from the art room to the classroom and vice versa. So as the art teacher and I reflected on the videotaped lesson sequences, on children's work, and on interviews with each other and with selected children, we learned about the relationship between the teaching and learning process and the students' learning. During reader's workshop, they children demonstrated some knowledge of story structure and elements, but it was when they wrote and revised drafts of their personal stories that they integrated and applied that knowledge. The children analyzed illustrations, but when the children produced the illustrations and analyzed the production process a deeper level of learning was achieved. During informal conversations, classroom observations, and interviews, the teachers noted that they had little formal time in their schedules to collaborate. Hence, there were surprises throughout the learning process. For example, the art teacher assumed the children would write fantasies about animals since all of the books were about animals, but the children wrote stories about themselves. If she had realized that the children's stories were going to be about themselves, she may have selected examples of books that included illustrations of people.

On-going assessment enabled the teachers to adjust the instruction to the students' level of understanding. While analyzing the videos, it became clear that students were using concepts and vocabulary in the visual arts and in language arts in their everyday conversations about books. It also became evident that they were applying their knowledge of story structure and of illustration in both classroom and the art room.

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Videotapes documented a learning process whereby expertise and responsibilities were gradually shared and shifted. Eventually, the classroom teacher helped the children analyze illustrations using concept of the arts and the art teacher helped the children analyze aspects of story structure. Reflecting on the learning sequences in the reading, writing, art workshop contexts, it became evident that the teachers drew on both behaviorist and constructivist learning theory when they put together their learning sequences (Brooks & Brooks, 1993, Brophy and Good, 1995). Children were encouraged to make successive approximations, to imitate human models, to work thoughtfully, self-regulate behavior, and develop standards for monitoring and evaluating their work. They received positive reinforcement for their efforts. The teachers modeled multiple strategies for helping the children discuss and create illustrations-visual, verbal, and tactile-kinesthetic . They also model comprehension strategies which focus on self-correcting, identifying discourse, predicting and confirming using sense-making and linguistic cues. These are characteristics of constructivist learning theory. Constructivist learning is active, social, and inquiry-oriented. Shaping, social learning, cognitive behavior modification, and mastery learning are usually associated with behaviorist learning theory. Children in were instructed on how to talk about books and about writing, how to listen and respond to one another during conversations, how to analyze and construct illustrations, and how to proceed in each step of the learning and book-making process. These skills are essential for collaboration, critical thinking, decision-making, and problem-solving.

It is a characteristic of constructivist theory that teachers construct the learning environment and learning in response to student learning needs (Brooks & Brooks, 1993). The teachers listened carefully to the way students were making sense of the new information and made accommodations in their instruction throughout the learning process. In other words, they modeled a constructivist approach to literature, literacy, and illustration themselves. Moreover, the teachers created opportunities and structures that enabled the students to center their learning around their own interests, to approximate competent performance, to integrate and apply knowledge of literature, composition and revision, and illustration throughout the project. Children were encouraged to use cues to make sense of the learning experiences. They used signal words, advanced organizers, and linked new with existing knowledge when reading and listening to stories. They participated in disciplined inquiry. They listened to narratives and viewed pictures in books for sheer pleasure, for information, and for further elaboration of implicit messages in the text. They carefully analyzed the illustrations, story structure, and stylistic features of each core book.

While the teachers taught sequentially, the students did not necessarily learn sequentially. Videotapes reveal that the children in the art room socialized as they interact with the materials. As they worked, some children sang about their work, some evaluated their progress and progress as they went along, some gave themselves instructions, and some were silent and others talked with their neighbors. No two children processed the material in the same way or at the same pace. Although several children copied the same line drawings, each child started in a different place and each child proceeded in a different way. Although all children heard the same stories, their original stories were neither similar in content nor in

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form. In other words, the students invented original beginnings, diverse characters, settings, conflicts, and outcomes.

In addition, the children's work was often constructed collaboratively. When they began creating illustrations for their original book, some children collaborated on making the illustrations, others created their own illustrations mixing and matching the various techniques they had learned. Children learned by working on authentic learning tasks. They talked and worked their way through the story writing process. Special efforts were made to situate the learning within the child's experience and knowledge and to structure the learning environment so that all children achieved some degree of success.

When the study began in September 1994, empirical observation of daily work revealed that all nineteen of the students entered second grade with a love of books, a rudimentary sense of story, and some confidence in their invented spellings and their natural ability as emerging artists. The children had listened to their parents and teachers read aloud selections from children's literature and were fairly adept at reading words in their environment. They were independent readers according to the reading development continuum of Cochrane, O., Cochrane, D., Scalena, D & Buchanan, E.(1988: 44-46). The children had played with art medium and materials in preschool, but the majority of the children did not frequent art museums and had never discussed the illustrations in the books they were reading. While the children attended weekly art classes, however art was not integrated into the everyday learning experiences in the classroom in meaningful ways.

From October 1994-February 1995, the children wrote, discussed, and interpreted stories and information. They also put themselves in the role of authors and illustrators and created their own books, critiqued each other's work, and publicly celebrated their accomplishments. Over the seven month period, there was clear evidence that these children had developed a clear sense of how to imitate story structure in their original stories. They also developed greater awareness of genres. When the children copied models and participated in structured lessons, they took turns and worked quietly. When the children were given opportunities to problem-solve-- to draft and illustrate their own projects they talked with one another and to themselves, sang out the steps in their procedures or the story line of their piece, and discussed their goals. Children acted as coaches for other children, just as their teachers had acted as coaches for them. By March, the children had written and could read their finished books and discuss the story and illustrations using language they had learned while analyzing literature, engaging in the writing process, and constructing illustrations.

Analysis of the videotapes and the children's work-in-progress helped in the planning and improvement of the lessons, routines and transitions, and learning of the content. Reviews of contemporary research in language arts and art education provided criteria for evaluating literary, literacy, and aesthetic instruction. To some extent the practices in both classrooms were constructivist and child-centered. Yet, the lessons were highly structured, carefully planned, and supported the children in the learning process. The videotapes documented the curriculum planning and revision process. Structured

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modeling and instruction in reading, writing, and illustrating stories, using a variety of examples of children's literature enhanced the literacy and aesthetic development of the children. The children started using literary and artistic terms when discussing stories both in structured and unstructured sessions. There was clear evidence that the children were motivated by the continuous attention they gave to the process of creating a book of their own over the course of seven months. They needed time to think, to practice, and to experiment with new ideas, materials, and concepts. Then they needed opportunities to plan, create, and revise their stories and illustrations. They eagerly prepared and shared their books with one another and with guests.

How do the children's choice of topic and genre change as they analyze children's books?

Initially, these second graders wrote stories about their own lives. Every single child chose to write a personal narrative, with titles such as: "Bart, the Great," "My family," "The Princess in the Castle," "The Runaway Roller-skates," "Our Family Trip to Florida," "The Skateboard Kid," and "My Gerbil." . We found it surprising in that each of the books used during modeling and instructional sessions was a fantasy. Apparently, children's own stories are great motivation for storybook writing. Topic choice and elaboration was not a trivial affair for the students involved. They were writing about their lives. After analyzing stories and illustrations in class, however the children's choice of topics changed, and their stories became more fantastic. In March, several students maintained that they wrote about their own experiences, but as they read the stories aloud, it was obvious that transformations were occurring. Reality and fantasy were blurred in the narratives. For example, one girl wrote that when she got her battery operated skates the button was in the on position, and the skates went skating across the floor, out of control. She wasn't pleased with them so she gave them to a friend. That was her original story. But in her finished version, the skates came alive, they hopped out of the box, and they caused many household catastrophes before she finally caught them. She gave them to a friend, and they never went out of control again. When I asked her if the story was real or fantasy she insisted it was real. She "really" wrote it. It was based on a "real" experience in her life. One boy wrote about a "real" dream he had. In his dream, a spider tried to get him and his brother. He tried to battle it off many ways, but to no avail. Finally a flying toilet plunger crushed the spider. Another girl said that she wrote "a fairy tale like *Sleeping Beauty* ," but she added that "the ideas came from me and from the story wheel that the teacher had in the classroom, and that's why they are stories about me." Another boy said that his ideas came from books. "I read books, then I wrote them." The ideas were "real." Some children did write fantasies--make-believe stories about animals. A few students wrote memoirs and travel logs. The remaining students wrote personal narratives. By March, children were writing in a variety of genres--fantasy, fairy tale, realistic fiction, and poetry. Some children wrote writing sequels to their first book. Some children were writing books that followed the format or extended children's books they were reading.

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How does instruction in illustration and art influence children's learning in language arts?

In the seven months that the teachers and students engaged in the collaborative book-making project, the children not only used the vocabulary of art and literature in structured discussions, they also used it when discussing their own spontaneous work. Although the children completed exercises in reading and art which involved some copying of author's and illustrator's techniques and styles, there was no evidence that the children had copied the content and style of the stories or the illustrators that they had read when they created their own.

When children receive connected, coherent, and disciplined instruction in visual literacy, and literary skills in the book-making project, their learning was enhanced. The videotape analyses and follow-up interviews with teacher and students reveal gains. The analyses also reveal transfer learning occurred in both classrooms. Teachers and students connected knowledge and skill development. The children clearly knew what they are doing when reading a book, writing their stories, and practicing illustration techniques. The videotaped analyses illustrate how the teachers are helping the children rehearse and remember the steps in production of stories and illustrations.

Here is a description and analysis of a sequence in the art classroom. This is how the teachers helped the students to build on their prior development. The purpose of the lesson was to help the children understand that illustrations are created to complement a particular story. Illustrators often get stories from authors, do research on the topic, plan mock-up studies, then create the illustrations. The story often informs the illustrator's choice of technique. In this sequence, the classroom teacher just finished reading *Rainbow Fish* to the students. When the students entered the art room the art teacher took five minutes to get the children to do a retelling.

> Teacher: Let's take a look at the illustrations for this book. What is this book about? What is the plot?
> Child: The book is about a blue fish with silver scales. He was beautiful with those silver scales. Other fish asked if they could have one of his scales and he always said, "No." Nobody wanted to be his friend. When he asked a starfish what to do, the starfish said. "You don't share." and the octopus told him to give away his scales. So the Rainbow fish gave away his scales. He gave them to everybody.

The purpose of the first question is to help the children activate knowledge and connect known to new information across disciplines and contexts. The art teacher is using the language of language arts. It is not her intention to have an exhaustive discussion on the book, merely to transition the children into the art lesson. After reviewing the plot of the story, the art teacher asked the children to explain why they thought the illustrator made a wise choice when he did watercolor drawings for the book.

> Teacher: So this is a nice sharing story, and the illustrations are fantastic! What is so neat about these illustrations?
> Child: They are sparkly.
> Teacher: So they are. So I went out and got some sparkly material.
> Child: They are made with water colors.

Teacher: So they are. Why do you think the illustrator used water color to make these illustrations.
Child: Maybe because fish live in water.
Teacher: Sure. That makes sense.

Analysis is the first step in the Discipline-Based lesson plan; demonstration is the second step (Rush, 1987). First, the art teacher helped the children analyze the illustrator's use of medium, then she helped them to analyze the illustration technique. She began with a talk through and a demonstration of the technique, then she had the children verbally review the procedure used for creating the illustration.

Teacher: I am going to show you a new technique and I am going to let you try it. I had to study this technique to figure it out. I will show you what I found out.
First, I am going to give you a water base marker. When you touch it with water it bleeds. That gives the edge of the line a squiggly look. It looks like my fish is in the water.
So today I am going to give you some practice paper. On your practice paper draw an outline of a simple fish. I'll put an eye and some fins on him.
Here is a trick. It's the magical part. Take a brush, and use tons of water on it. If you take the water and barely touch the line, it will look like it is smearing. Don't paint the water inside of the fish at all.
What do you do exactly? Start with the watercolor line. Paint on the line. It'll make the line look blurry on the outside. Okay, We'll make the line smeary. After that we'll do a water color wash in blue. Then we will paint the inside of the fish.
Now I will pass out the water and the water color.

In that sequence, she gave explicit instructions about how to use the materials. She used signal words (first, here, then, next) to guide the children through the procedure. As she stepped out the procedure, she demonstrated each technique. Before the teacher distributed the supplies, she checked to see if the students understood the task.

Teacher: What do we do first?
Child: Draw a fish.
Teacher: Then...
Child: Paint around it with water.
Teacher: Yes, touch the line a bit and it will bleed.
Teacher: After that, paint the water around the fish.
Teacher: Then you can add color to the beautiful fish.

As the children work the classroom teacher entered and asked the children what they were doing and why. The children explained the technique they were using. In the last few moments of the class, the art teacher asked the students to review the procedure they are practicing, then she named the technique.

Teacher: What is this technique called? It is called wet-on-wet. You have to cover the entire paper with water. Go clear to the edges of the paper. You use lots of water. Tons of water. This watercolor technique is called wet-on-wet.
Next time when you come in and these are dry we will add the sparkly scales to our fish.

The teachers modeled collaboration. They did much of their planning while observing each other's teaching and while talking with the children about what they were learning. They both helped the children to chunk information. In the closure activity, the art teacher linked the new learning with previous

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learning, in a way that was similar to the one used by the classroom teacher did when she led the students in a review of the steps of the writing process.

Teacher: Okay, so let's review what we have learned about illustration techniques and illustrators so far.
Child: We have learned about collage.
Child: We have learned that Leo Lioni often does collage.
Child: Eric Carle does, too.
Child: We learned about line with *Harold and his Purple Crayon*.
Child: We have learned about wet-on-wet and watercolor.
Child: The Rainbow Fish is an example of wet-on-wet and watercolor technique.
Teacher: Why do you think that the illustrator chose watercolor?
Child: Watercolor is like water. You can wash it on, then paint layer over layer until it looks like waves.
Teacher: In the next session we will learn about silhouette.

Just before the children leave, the art teacher asks them to review the illustration techniques they have learned so far. Children learn new concepts by reviewing them. In this lesson the teacher used a variety of memory techniques to help the children remember art concepts--association (Why do you think the illustrator used water color to create the illustrations for *The Rainbow Fish)*, information processing (What do we do first?), and focusing (attending, rehearsal, chunking, and storing) strategies to help the children learn the new material (Brophy and Good, 1995:).

Classroom observations during the final book-making phases illustrate the extent to which these students are spontaneously integrating knowledge across instructional contexts and across disciplines. For example, when the children were making the covers for their book, Ms. Smith noticed that without any prompting what-so-ever the children immediately turned the books over to the back cover and wrote a summary of their story. Then they flipped the book back to the front and worked on their cover illustrations. All children "knew" that they needed to include the title and the author's and illustrator's name.

How did the children revise?

One of our areas of investigation was revision. We found that the children are always revising, but those revisions did not show up in print. We found that they revised their texts when they were illustrating their texts; they revised based on verbal feedback from peers, and they revised when they were reading their published book to other people. The children were in a continuous process of composing and revising their work.

In the classroom, the students revised their stories throughout the writing process: when they are reading books, drafting, and during the publishing phase. Initially, the children needed to build background knowledge and experience in literary and illustrative techniques. They needed to talk with their peers and their teachers about stories and illustrations. They needed multiple and sustained opportunities to *play* with their ideas, to practice new illustrative and literary techniques, and to craft, illustrate and revise their stories in-progress. Eventually, the students revised based on conferences with peers and their teacher. In During writing workshop, the teacher prompted the children to review and rehearse the steps in the

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authoring cycle. She wanted the students to proceed at their own pace in their writing projects, but first she wanted to be sure they knew the sequence. She also wanted them to explain whey they were revising a piece. Here one child's discussion of the revision and editing of his story.

> Teacher: What are you doing now?
> Child: I am crossing out parts.
> Teacher: Why don't you want them?
> Child: I don't need them, some words I don't need.
> Teacher: You are revising.
> Child: I finished outlining the story. Now I have to cut it down. Then I have to check every word so that I know it is spelled right.

The child clearly has strategies for revising and editing. Most of the children are not at this level of functioning. These are the first stories they have ever written. They are delighted to have their ideas on paper and illustrated. Ms. Jones observes that she could have them work on these stories all year so that they might get them into a more professional state. She could coach them into revising the story so that it pleases her, but she agrees with Graves (1983) when he writes that it is the author's responsibility to decide when and what revisions are necessary. She wants the children to feel a sense of accomplishment as they are learning. So she accepts approximations.

Did they revise based on verbal feedback from peers?

Student interviews, teacher interviews, and empirical observation revealed that the student's revised their stories verbally in conferences with one another and with they teacher.

> Interviewer: Did you make any changes before you published it?
> Child: Yes.
> Interviewer: How did you decide what to change?
> Child: I had a conference with my teacher and my friends.
> Interviewer: What kinds of changes did you make?
> Child: Oh, I added things. I added descriptions. I added details.
> Interviewer: Did you make any changes when you illustrated your book.
> Child: I made two copies of my book. I made one in the classroom and I made one in the art room. The one in the art room was typed. I cut the sentences out and then I drew pictures of them. There weren't as many words on the pages in the book I made in the art room.
> Interviewer: Which came first, the pictures or the words?
> Child: The words. I thought about the words, then I made the illustrations.

The classroom teacher has the students publish the edited story in two ways. First, each child creates a pamphlet version written in manuscript and illustrates with drawings in the classroom. Then the children receives a typed version of their story which they illustrate in the art room. That is another instance of revision within the writing process. The activity helps the children understand that texts can be reinterpreted and reworked.

> **[Publishing the final draft]**
> Teacher: We are going to publish our stories in two forms.
> First, let's copy over our drafts on these story papers. We will use these forms in our classroom. You copy your final draft onto this paper, then illustrate it. Be thinking of drawings that will complement your words. You may write then draw or draw then write.
> Next, I have typed up the final versions of your story. They will be in the art room. You will have to decide what illustration technique you will use to illustrate your story. Will you use

> watercolor, collage, silhouette, or tempera painting. Think of how you will select text to accompany the illustrations you create.

In general, authors create the text and illustrators illustrate it. The teacher is modeling the usual process. We do not know what might have occurred if the instruction had been reversed and the illustrations became the basis for the text.

Did children revise their texts based on their illustrations?

Ms. Smith noted that initially the children proceeded with their illustrations in a deliberate way, producing the art as if the "knew" what they were going to do before they started. The lesson development in the art room focused on analyzing and practicing specific illustration techniques. The students began to alter that pattern when they engaged hands-on exploration of art materials and techniques and copied the work of illustrators. When attempting to copy, the students discovered how the illustrators used lines, paint, and other materials to create images and the children experimented with those new methods. This initiated the process of revision.

After they completed their stories, the students created illustrations based on their text. They organized their text differently and in manuscript and typed versions. They also created very different illustrations for each version of their book. When the children received the typed version of their story, they read it, thought about the illustrations they wanted to make and drew a mock-up of their book, cut the text to match each illustration and labeled each strip to match the illustration they had roughed-out in a frame in the mock-up book. Then they went about making illustrations. A review of the finished products revealed that the drawings demonstrate more and more detail and utilize a variety of art materials--collage, cut paper, paint, water color, as well as line drawing. A review of the videotape during the final illustration phases, revealed that the children used language in the art classroom which illustrated an emerging understanding of concepts and vocabulary of story structure, writing, and art and an on-going engagement in the composing and revision process.

The children were reluctant to make any revisions in either their stories or their illustrations after they had gotten them down on paper. They were willing to read and discuss their stories with others. Each time they read their story, children referred to the illustrations, but they did not rewrite sections of their story. They were willing to draw and mock up their illustrations, but once they began the illustrations for their book, they were reluctant to change either the text or the illustration. Only one child actually revised his text to accommodate his illustrations.

The following interview took place in early March, 1995. The child talked about his approach to writing and revision.

> Interviewer: How did you go about writing your story?
> Child: I just wrote the story and that was all.
> Interviewer: What is the title of your story?
> Child: "The Close Call". It is based on a "real" dream I had. This is me. The bad guy is the electrocuting spider. The electrocuting spider is attacking me. He didn't get me. (laughter) [Pointing at the illustrations]

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> You see he is mostly green here with pink in this book. I am making it like a cartoon book. It is in done in pencil. I have two versions of the book. In the other version the spider is mostly pink. I painted that pictures for that book in the art room.
> Interviewer: Do you want to read the books to me.
> Child: Sure.

The child, Thomas, like most of his peers, was unaware that he had revised his story. In conversation he said he "just wrote the story and that was all." However, there was ample data that revision had occurred and was occurring even as he shared the story. As he read both versions of his original book, he frequently referred to the illustrations. The manuscript version was illustrated in color pencils. It was drawn like a cartoon. There was balloon dialogue throughout. As the child read the story, he stopped periodically and explained the significance of both the illustration and of the balloon dialogue. When he read the second version of the story, he immediately turned to one of his illustrations and he explained that this was his "favorite" illustration. He felt that it captured the entire idea of the dream. In the illustration the electrocuting spider was being attacked by a toilet plunger. The plunger did away with the spider and the boy woke up in his bed, realizing that he had been dreaming. Thomas then read the story, hastily, and referred to the illustrations only occasionally. When he referred to the illustrations made in the art classroom, he discussed the success he had with using the illustration technique, painting. "Look at that awesome color." And he referred to the content of the picture, "Now that is my brother and that is me. That is exactly how we looked in the dream." When Thomas finished sharing his stories he arranged them in his portfolio in the order of his most favorite illustration technique to his least favorite technique. He remarked on the color and shapes of the illustrations in his portfolio and in his book. Parson's (1987) notes that when children begin to appreciate art they use terms like "favorite, beauty, and so on."[5]

Another child, James, shared his book about a family vacation. He showed the title, but did not read the text at first. Instead he explained that he and his family had gone to Florida last summer. The illustration on the front cover was comprised of the title, *Our Trip to Florida*, stacked one word under the other, on the left hand side of the page-- a scene of the ocean in the middle of the page, and the name of his state at the top of the page and Charlotte, NC. in the middle of the page, and Fort Lauderdale, Florida, with arrows connecting one place to the other, on the right hand side of the page. He flipped quickly to the narrative. Quickly and confidently, he read his story. His story had a here to there, bed to bed narrative style. The pictures highlighted critical events in his visit. He stopped to explain only one picture. He explained his favorite picture, then he described the technique he used to create it.

> The narrative read: "My brother and I went swimming."
> James looked up and said, "This is my favorite picture. I call it ' My underwater adventure.' That's my brother and that is me. We stayed in a place that had two pools. We swam there everyday. Here we are swimming underwater. This is a picture of us swimming in the ocean. We pretended that we were sharks. I used watercolor to illustrate the pictures because we were in the water."

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[5]Parson's (1987) notes that children respond to art work using terms like these: favoritism, beauty and realism, expressiveness, style and form, autonomy.

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James, like Thomas, discusses his "favorite picture. The picture is a favorite because it depicts a fun scene with his brother. He has intentionally selected watercolor as the medium for the painting. James, like Thomas told elaborate stories while looking at particular illustrations. Children do use illustrations to interpret text, but they have their own criteria for discussing illustrations. They discuss their preferences, their experiences, and their intentions.

Emily organized her portfolio in terms of the most "beautiful" to the least "favorite" piece. She really enjoyed using the watercolors. She liked the scene she created, a field of grass and flowers because it reminded her of the fun she had rolling down a grassy, flower-covered hill in her neighborhood. She also liked the effect of the watercolor--"the soft, clear-like color." She enjoyed the "picture" that she created when she painted four trees, two on the left and two on the right, and placed the long-necked giraffe in the center. Collage wasn't a favorite. Emily read the finished version of her story. There was a typographical error in one of the sentences. Emily stopped at the error, looked at the words around the word, talked to herself for a minute, looked at the illustration, and said, "Oh, I remember..." then she reread the text substituting the correct word for the misspelled word in the text. It was evident that she used the illustrations to revise the text, but she did not correct the text.

Conclusions

Our research documents the learning process in a discipline-based art program and literature-based, workshop-oriented language arts program. The analyses of field notes, videotapes of lesson sequences, student work, and interviews with teachers and students revealed the how the teachers taught and how students learned aesthetic and literary skills needed to successfully make a book. The analyses also document the process of gradual shift of responsibility for teaching reading, writing, and visual analysis from the classroom to the art room, and vice versa.

When the art teacher and the classroom teacher collaborated on the bookmaking project, they learned disciplinary knowledge from one another. They connected the instruction in a seamless way. The teachers , competent at explicitly and implicitly modeling skill and strategy instruction in their discipline, shared techniques through videotapes, discussions, and observations. The classroom teacher adeptly modeled and talked through each step in the writing process, having the children construct and analyze group stories even as they worked on their own stories. The art teacher analyzed illustrative techniques, demonstrated them, then involved children in a talk-through of their learning process as they experienced each illustrative technique. Both teachers taught strategies and skills using an interactive, process approach. Throughout the experience, they based their instructional decisions on the needs of the children, not on an external plan.

The teachers also knew how to sequence learning for maximum retention of concepts and skills in both the arts and language arts. The bulk of the instructional time was spent by children talking and doing. The teachers learned how to connect instruction across contexts so that the students could engage in transfer learning. Those who are concerned about coherent and outcome-based education can learn much about how to scaffold children's learning by entering classrooms where skilled professionals, such as Ms. Smith and

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Ms. Jones, are working across disciplines to create contexts and practices that support literature, literacy, and illustration skills. Both teachers modeled and taught group work skills--leadership, joint decision-making, problem-solving, and communication.

Our investigation of nineteen second graders clearly confirms the relationship between teaching children about illustrations and texts, then having them create, and evaluate their own work . We hypothesized that the children would increase their use of vocabulary and that their application of knowledge gained from analysis of literary and visual qualities of picture books would help them to develop as readers, writers, and illustrators. The children did increase their knowledge and use of concepts and terms related to literature, writing, and the arts--in their products, during structured lessons, and in informal conversations.

Teaching the arts in book-making improved learning in both language arts and in the arts. The children learned how to read a book-- to survey, predict, confirm, listen for details, analyze story structure, recognize point of view, and identify features of genre. Children learned how to analyze illustrations-- how to pay attention to details, to seek the hidden message, to be critical thinkers. Children learned how to produce illustrations, how to analyze, produce, use the concepts and vocabulary of artists and illustrators, and how to talk about and evaluate their own illustrations. Children learned how to write-- how to link their writing to literature, select a topic, address an audience, draft, talk with peers, develop and transform their stories.

The children's treatment of topics, use of illustrations, and knowledge of revision evolved during the unit. The children did not necessarily change their topics, rather they transformed their personal narratives into fantasies, fairy tales, and realistic fiction as they learned more about those genres. They borrowed story structure and lines from books they read. The children learned about artists' intentional use of illustration. They discussed the connection between their choice of art medium and their illustration. The teacher noted that they were confident that they were illustrators as well as authors.

Children revised during the entire unit. The child-centered workshops facilitated revision. The students had a clear understanding the overall task, but were allowed to arrive at the outcome according to their own rhythm. They learned the basics of book-making in coherent lessons, but were allowed opportunities to practice, copy, and play enroute to the final book. They learned drafting and production techniques and shared their procedure and insights verbally and visually during the learning process. They organized their works-in-progress in portfolios and writing folders so that they could look back and see progress. They had the proper tools: folders, art materials, revision material. They had access to resources--teachers and peers as well as supplies.

Bagham (1992), investigations revealed that children focus more on their writing and less on drawing. Eventually, their drawings become less spontaneous and fresh, disappearing from their journals and from much of their writing as children proceed through the early years of school. We know from our own research that this pattern does not have to occur. How can we help our children to continue to use their visual imagination and to develop visual literacy? We can focus on the importance of illustration in

complementing text. All of the children used drawing as a complement to text, often as a form of note taking. In the next three months of school, our research will continue. We want to check the student's writing folders to see how the children use illustrations in their daily work. We will also observe them to see if the children continue to transfer learning from the classroom to the art room in connected ways.

Here are some additional questions that might be used to guide future research on integrated arts and language arts collaborations:

Why do children make illustrations to accompany texts? (motivation)

What criteria do children use when selecting images to accompany texts or texts to accompany images? (cognition and skills--content knowledge)

How do children go about creating illustrations to accompany texts? (cognition and skills--procedural knowledge)

When do children construct illustrations to accompany texts? (cognition--conditional knowledge)

How do children process illustrations of others? (cognition and skills)

What could be learned if the children created the illustrations before writing the text?

The research has implications for the profession, particularly for teachers and for teacher educators who are striving to create more child-centered, outcome-based, interdisciplinary classroom contexts.

- First, it takes time and education to become technically competent at teaching a discipline, and disciplinary expertise is very important to effective teaching (Shulman, 1987).
- Second, 'the having of wonderful ideas' (Duckworth, 1987) is the beginning of contructivist teaching, but not the end. Children need structure, and teachers need to be models, and to give children opportunities to learn through experience and guidance. Defining appropriate outcomes, sequencing instruction, and teaching children how to become effective workers, decision-makers, and problem-solvers are essential competencies in contructivist classrooms. However, our research illustrates that it is as important to involve our teachers and preservice teachers in reflecting on the implementation phase of such a unit.
- Third, learning how to compose and revise curriculum throughout the learning process is an essential competency for teachers in constructivist classrooms. Although the teachers in the study had a fixed plan in mind and although they sequenced and delivered instruction in a systematic way, ultimately it was the on-going assessment of learners' needs that informed the teacher's selection of subject matter, methods, and structures on a day-to-day basis.
- Fourth, action research is an important part of our effective educational practice. In action research, teachers collect information about practice. They use that information to do analyses, make interpretations, compare and contrast what they are doing with what others in the field are doing, and self-evaluate. Reflection and self-evaluation that action research encourages can lead to greater understanding of the relationship between teaching practices and experiences of learners.

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Reflective teachers tend to compose and revise the learning environment and the learning throughout the learning process (Tabachnick and Zeichner, 1991).

- Finally, reading, writing, and illustration must become a part of our own practice as professionals. When we create a visual and verbal record of our practice and our research, we empower ourselves to reflect on the learning environment and the learning and to consider the consequences of our actions and interactions on others.

The research has implications for the improvement of teaching and learning. The teachers' discussions of teaching and learning centered around creating literacy and instructional contexts and selecting materials and practices that supported the learners. Every instructional decision required thoughtful research on teaching subject matter. Analysis of the relationship between learners and teachers required research on interactions between socialization and communicative practices. Analysis of the learning process required research in child development. Analysis of outcomes and products required research on child development. Interdisciplinary and inter institutional action research has the potential for improving teaching, teacher education, and student learning. Action-research on practice fosters a norm of reflection on learning. In this case, the collaborative research illustrates how interdisciplinary experiences create new structures and practices within classrooms. It also documents how children and teachers transfer knowledge from one context to another. The transfer of responsibility and of application of skills, concepts, and attitudes leads to enhanced learning.

Who benefitted?

The teachers benefited directly from the action research. Ms. Smith and Ms. Jones established a curriculum unit, an instructional sequence and strategies, which combine the best aspects of discipline-based and literature-based education. They knew the subject matter content and the manner in which to communicate that content to their students. Both teachers were also attentive to the relationship between texts and illustrations and to the way people use illustrations to comprehend and construct texts. They knew their students. They knew that development influences what children know and how they know it. They knew that to teach those students effectively, they needed to create a diversity of opportunities and experiences and they provided the scaffolding needed so that each child could perform optimally. They reflected on the children's progress on skills lessons and identified differences across the similarities. Some children used the entire space on a paper; some used only a small area. Some children approached the task of illustration in a sensori-motoric fashion, yet their illustration expanded on the sense and substance of the narrative; others exerted more deliberate control over the medium and the message. They felt that videotaping and analyzing the videotapes was particularly helpful. Reflection on the videotaped lessons helped them evaluate their own lesson development, instructional arrangements, and the students' learning process.

The children benefited from the teacher's collaboration. They saw the connections between reading, writing, and art in the book-making project. Art activities provide children with a natural context for

knowing and representing their world. Creative expression, imagination and critical thinking were stimulated as students engaged in meaningful arts and literary activities. In the early years art is the precursor of language literacy because children scribble before they write letters. We know that young children represent their world in drawings before they write stories. As a result of this inquiry, we know that writing enables children to leave a record of their lives and thoughts. Making illustrations to accompany their writing helps them to extend their interpretations to include images. Our research illustrates that children's drawings and their paintings are intentional and the images expand the narrative in significant ways. Whereas language is crucial to leading us to self-understanding or to reporting of our understanding through logical analysis, visual images affect us through our contemplation of them. We study children's language in order to understand their experience and knowledge. We need to train ourselves to be just as sensitive to their use and understanding of images.

The action research helped me to become a better teacher educator. In analyzing the videotapes with the teachers and in writing this paper, I drew on research from art and language arts, teaching strategies, learners and development, and the social context of learning. This approach-- going from experience-based knowledge to theoretical analysis seems like a good way to bridge the gap between reserch and practice, particularly if I involve the students as action researchers, studying their own practice. My students usually plan integrated, literature-based curriculum units in one of the undergraduate reading methods courses. The units are usually impressive and extensive. The students enjoy planning those integrated, literature-based units. In most cases, each student creates his or her own unit. I see real value in the collaborative planning process. In the next year, I will have my undergraduate preservice teachers collaborate on unit planning. I will have them videotape a series of lessons from their unit, then we will analyze them together. Perhaps they, too, will learn how to compose curriculum which combines modeling and instruction of discipline-based approaches with developmental and constructivist approaches to learning.

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